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ABSTRACT

In the last several years the universities in Ontario have been absorbing into their curricula the programs of teacher education and the health sciences. In 1971 the Minister of University Affairs referred in a letter to the presidents of provincially-assisted universities to a need to extend the inventory of physical resources and the capital funding formula to embrace teacher education and the health sciences. To this end, four task forces were assigned to study the overall situation. One of these task forces was the Task Force on Space for Education and had as its mandate to concentrate on the space needs of faculties and colleges of education and to make recommendations concerning this area. This document presents their report. (HS)

*Council of Ontario Universities*
*Conseil des Universités de l'Ontario*

# Building Blocks

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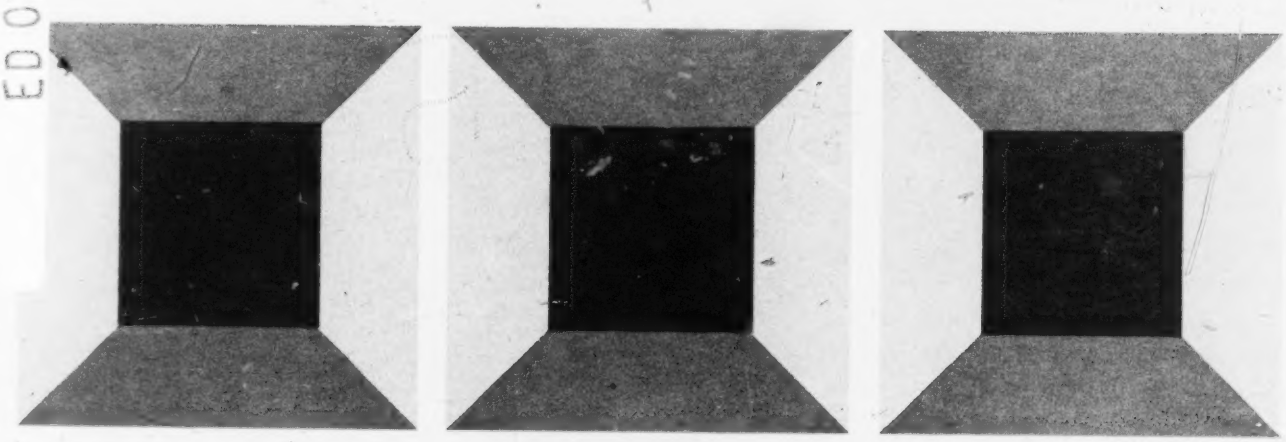
**VOLUME 2**

## Report of the Task Force SPACE FOR EDUCATION



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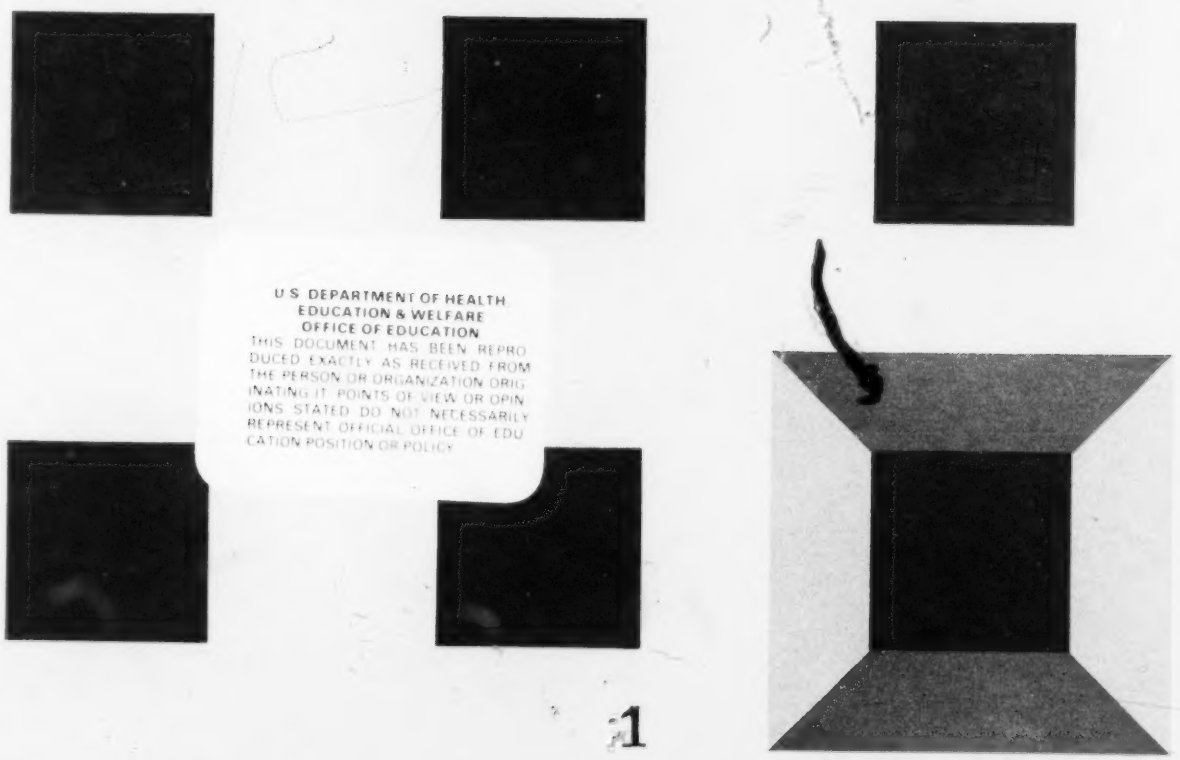

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# REPORT OF

# THE TASK FORCE - SPACE FOR EDUCATION

Council of Ontario Universities
Conseil des Universités de l'Ontario
102 Bloor Street West, Toronto 181, Ontario

72-11

July 1972

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# REPORT OF THE TASK FORCE ON SPACE FOR EDUCATION

## Introduction

In a letter of April 21, 1971 to the presidents of the provincially-assisted universities the Minister of University Affairs referred to the need to extend the inventory of physical resources and the capital formula to embrace teacher education and the health sciences. This matter was raised again in a letter of May 10, 1971 from the Chairman of the Committee on University Affairs to the Chairman of the Committee on Capital Financing of the Council of Ontario Universities. The letters above referred also to the need to reexamine the space and utilization standards implicit in the interim capital formula on completion of the Ontario Universities Physical Resources Study. The latter study, begun in 1967, was expected to be completed in the fall of 1971, and was to include recommendations as to appropriate space and utilization standards.

In order to be in a position to make a useful contribution to the resolution of the questions of capital formula revision and the inclusion of teacher education and the health sciences within the formula, the Council of Ontario Universities established four task forces. A task force on space and utilization was directed to consider the problem of appropriate space standards, based on realistic utilization goals, and the most appropriate input measures to which these standards might be related. This force was to concentrate its attention initially on those programs already covered in the interim capital formula. A second task force was charged with an examination of building costs, both university and non-university, in the expectation that unit costs of various kinds of space would be needed in a revised capital formula. A third task force was to concentrate on the space needs of faculties and colleges of education and make recommdations to the first task force concerning this area. The fourth task force was to carry out a study similar to that of the third but dealing with space for the health sciences.

The Task Force on Space for Education was made up of members and resource personnel from those universities already engaged in teacher education or likely to be so engaged in the not too distant future. Those involved are listed in Appendix A. The first meeting was held on August 3rd, the last formal meeting on December 29th, 1971.

## Procedure

The Task Force on Space and Utilization had already developed a methodology for the derivation of appropriate space and utilization standards prior to the first meeting of this task force. After a careful examination it was decided to adopt and adapt this methodology for use by this task force as well.

The space and utilization group had first adopted a space classification scheme which established sixteen categories, together with the necessary definitions and descriptive material, to which all the space in each university can be assigned. These categories are related as far

as possible to the administrative organization within a typical Ontario university but modified so that comparisons can be made with the classifications used in other jurisdictions. The space classification scheme is attached as Appendix B.

The space and utilization committee had then discussed which input measures were likely to be the most appropriate for each space category and had decided to test several for most categories in order to establish which one was best. The input measures tested for each category are listed in Appendix C.

Questionnaire data sheets were then drawn up so that each university forming part of the test sample could report the space in each category and the value of each input measure. Two sets of data sheets were required. The first set reported what space was available as of December 1, 1970 and the input measures for the same date. The second set reported what space was required or should have been available to provide adequate amounts of space in each category, again as of December 1, 1970 and for the same input measures presented in the first set. In arriving at the amounts of space required the respondents were expected to examine critically the utilization that was being made of available space and report figures which in their best judgement would indicate real need as opposed to desires.

Responding to the "required" set presented difficulties for some institutions in the education sample and it was decided to allow each institution to report space required, either for the input measures of December 1, 1970 as reported on the "available" set, or for input measures to be reached at a future date when the existing facilities, or facilities under design, would reach capacity utilization. This alternative was permitted because several institutions had examined carefully the capacity of existing or planned facilities and could provide figures for the "required" data sheets more readily if it could be done in this manner.

A few categories in the space classification scheme seemed to be applicable only to a university as a whole and not to a faculty or college of education specifically and information with respect to these categories was not required of the education group.

Copies of the questionnaire data sheets "available" and "required" are attached as Appendix D and Appendix E respectively.

On receipt of the completed data sheets, the task force examined the findings for each of the space categories in turn. The space available and required in each category was related to each of the input measures to be tested for the category to obtain per unit space factors. The values and range in values of each factor so obtained were discussed, institutional representatives were questioned when the factors for their institution seemed inconsistent with the others, mistakes in interpretation and reporting were corrected and so on until the group was satisfied as to the realism and validity of the factors. It was then apparent that wide variations in one or more factors represented differences in the nature or methodology of different institutions and that the input measures to which these factors were related would not be very useful for formula purposes. Usually the

choice of the most appropriate input measure was obvious in that it produced the narrowest range of variation in the per unit space factors for the test institutions. It was generally true that the range of variation was narrower in the factors based on "required" rather than on "available" space indicating that historical data are not necessarily the best data to use in developing a space formula. A particular input measure and space factor for each category were then adopted by the task force. In selecting the value to be adopted for each factor the weighted average of the factors based on space "required" for the test institutions was most frequently used. Departure from the weighted average was made only where there was good reason for eliminating the data from one or two institutions from the sample for the particular category of space under consideration.

Except where noted the procedure above is that followed by the Task Force on Space and Utilization and will no doubt be described more fully in the report of that group. Since it may be necessary to bring teacher education under the present interim formula the Task Force on Space for Education carried out one further step.

The input measures and per unit space factors adopted following the procedure above were used to obtain an approximate overall space factor for comparison with the factor of 96 square feet used in the interim formula. For reasons set out later, the comparison is not too meaningful and caution should be used in employing it to derive a capital weight for Education for incorporation into the present interim formula.

Some Preliminary Comments

For a number of reasons data relating to space "available" or space presently occupied do not provide the most useful base for deriving space and utilization factors for use in the future. One faculty (Ottawa) is operating in temporary and completely inadequate quarters, another (Toronto) has a mixture of rented space and permanent space, much of it now obsolete and too small for the methodologies which have developed since its construction. Most faculties have space designed to standards set by the Department of Education, standards which are quite different from those possible in the current financial situation. Available facilities were designed for an era when the colleges or faculties of education were separate entities, in the future they are expected to be integrated within their respective universities. One faculty (Queen's) currently has more space available in some categories than is required for its present enrolment. In view of the above, the space and utilization factors were derived primarily on the basis of the "required" data assuming the colleges or faculties to be an integral part of their universities.

The heavy reliance on the "required" data raised an immediate concern as to its reliability and realism. The task force had this constantly in mind as it considered the various space categories and the most appropriate standards for each and has tried to present adequate statements in support of each recommendation in the section which follows.

The assumption of integration into a university complex gives cause for a concern of a different kind. Because of it the proposed factors make no allowance for what might be termed the built-in realities faced by those faculties which are separated or isolated from the rest of their

universities, and occupying facilities built or designed under an earlier jurisdiction. Some relaxation from the strict application of new standards to these faculties, and special assistance for relocation or extensive alterations, where these make sense, should be provided.

While the advantages and usefulness of a capital formula approach are known and pretty well accepted, less is known about the possible disadvantages and how to minimize them. A formula encourages inventiveness in the sense of getting the most space from the cash entitlement generated by formula, which has the almost immediate result of holding down unit costs - a benefit not to be taken lightly. But a formula tends to be a static thing, or to lag behind new developments, and worse still may actually discourage highly desirable innovation and experimentation. Rather than try out some new technique or methodology and risk a possible unproductive allocation of formula funds, faculties may be tempted to do the safe thing and perpetuate the traditional approach. Means must be found for keeping the formula up to date and for encouraging new and desirable changes in the concept and methodology of education.

Teacher education programs are much heavier in student contact hours than most non-professional university programs. Twenty-four hours contact time per week is a normal requirement. In addition, much of the non-scheduled time is spent in individual assignments which require the resources and the hands-on experience available only within special college facilities. The count of the actual scheduled use of a room is therefore an incomplete measure of the use it will get in the total program.

Current practices in faculties of Education require many special service or support spaces - observation teaching areas with one way screens, micro teaching studios, television production facilities, media resource centres, language laboratories, curriculum libraries, workshops, etc. These needs result in space per student factors generally higher than for general arts, for example, and more comparable with those of other professional programs. This will become apparent in the next section.

Findings and Recommendations.

The findings are summarized by space category and the recommendations presented below follow the order of categories in the space classification scheme attached as Appendix B. For a complete description of what space is included in each category please refer to Appendix B.

1) Classroom facilities

Classroom space was further subdivided initially into (a) classrooms proper, (b) seminar rooms and (c) service to classrooms. Each of these was related to the input measures (a) number of stations (b) full-time equivalent students and (c) non-laboratory student-contact hours per week. After preliminary examination it was decided to lump classrooms proper and seminar rooms together and consider only two subcategories (a) classrooms and seminars and (b) service space.

The ranges found within the test institutions for available and required space by input measure are presented in tables 1A and 1B which follow. The weighted means are also shown.

TABLE 1A AVAILABLE

| Unit Measure | Class and Seminars | | Service | | Total Space | |
|---|---|---|---|---|---|---|
| | Range | Mean | Range | Mean | Range | Mean |
| per station | 11.1-23.8 | 17.2 | 0.2-3.5 | 1.1 | 12.0-25.1 | 18.4 |
| per FTE | 16.9-59.2 | 25.2 | 0.3-5.3 | 1.7 | 17.2-62.0 | 26.9 |
| per SCH | 0.79-2.77 | 1.12 | .02-.16 | .07 | 0.9-2.8 | 1.2 |

TABLE 1B REQUIRED

| Unit Measure | Class and Seminars | | Service | | Total Space (a) | |
|---|---|---|---|---|---|---|
| | Range | Mean | Range | Mean | Range | Mean |
| per station | 10.0-25.0 | 18.4 | 0.1-3.8 | 1.2 | 10.7-25.1 | 19.9 |
| per FTE | 19.3-29.0 | 22.5 | 0.1-5.9 | 1.5 | 19.8-34.9 | 23.2 |
| per SCH | 1.02-1.32 | 1.24 | 0-0.16 | 0.08 | 1.1-1.3 | 1.3 |

(a) The total space sample includes one more institution than the sample showing the breakdown into subcategories.

It was decided to adopt as total space standards 19.9 sq.ft. per station (including service), 23.2 sq.ft. per FTE and 1.3 sq.ft. per contact hour per week. It is recognized that these are higher than could be justified for the university as a whole but could be justified for education on a number of grounds. It is difficult to draw a clear-cut distinction between classrooms and laboratories in Education. The classroom is used as a teaching laboratory for both scheduled and non-scheduled activities. Classrooms are frequently equipped with the needs of a particular school subject in mind. In this sense they become supplementary resource centres where students spend a considerable amount of unscheduled time working on individual projects

which require these resources. Because of their specialized nature they usually cannot be made a part of the general university pool, even where physical proximity would allow this, hence the utilization for scheduled meetings tends to be low.

2) Laboratory Undergraduate and
3) Laboratory Graduate

A preliminary examination indicated that it was not necessary to distinguish between the laboratory space needs of those proceeding to a bachelor's degree or equivalent and those proceeding to the master's degree in Education. Laboratory area proper and laboratory service area were initially recorded separately but it was decided to consider only total laboratory space and relate it to (a) stations, (b) full-time equivalent students and (c) laboratory contact hours per week. The findings are summarized in tables 2A and 2B which follow.

TABLE 2A AVAILABLE

| Unit Measure | Laboratory Space | |
|---|---|---|
| | Range | Mean |
| per station | 33.5-118.9 | 49.5 |
| per FTE | 8.3- 36.9 | 19.6 |
| per SCH | 2.9- 9.2 | 3.6 |

TABLE 2B REQUIRED

| Unit Measure | Laboratory Space | |
|---|---|---|
| | Range | Mean |
| per station | 67.3-100.3 | 73.1 |
| per FTE | 29.5- 46.6 | 35.6 |
| per SCH | 5.0 -11.5 | 6.6 |

An examination of laboratory and classroom space together indicated that those institutions which had high classroom space per FTE

requirements tended to have low laboratory space per FTE requirements and vice versa. This substantiates the difficulty referred to earlier of interpreting what constitutes a laboratory session in the field of Education. It was agreed to adopt 58.8 sq.ft./FTE for the combined classroom and laboratory categories made up of apprximately 23.2 sq.ft. of classrooms and 35.6 sq.ft. of laboratories. Some of the laboratories in Education are non-scheduled resource spaces for the production of teaching materials. In addition, faculties of Education, particularly those preparing teachers for secondary schools, are expected to include in their programs a large range of teaching options - e.g. theatre arts, music, art, commercial subjects, technology subjects, biology, chemistry, languages, school librarianship, etc. etc. Each of these requires special facilities, most of which are not found in regular university space. For example, a university chemistry lab is too sophisticated and specialized in its equipment to be a suitable place to teach curriculum development and methodology for secondary school chemistry. Again the Librarianship option requires a library workshop equipped with collections and tools to work in the Dewey Decimal Classification rather than Library of Congress. These program conditions impose a requirement of a larger number of specialized classrooms and laboratory areas than might be required in a more traditional lecture program.

4) Instructional Staff Offices and Related Spaces

Three subcategories of this category (a) academic office space, (b) support staff space and (c) service space were considered initially and related to (a) full-time academic staff (b) full-time equivalent academic staff and (c) full-time equivalent students as input measures. It was decided to reduce the space subcategories to (a) academic office space and (b) total instructional office space (the sum of the first (a), (b) and (c) above) with the results presented in Tables 4A and 4B below.

TABLE 4A AVAILABLE

| Unit Measure | Academic Office Space | | Total Instructional Office Space | |
|---|---|---|---|---|
| | Range | Mean | Range | Mean |
| per FT Academic Staff | 115.3-187.7 | 163.8 | 183.5-417.4 | 253.6 |
| per FTE Academic Staff | 115.1-187.7 | 152.4 | 183.5-389.4 | 235.9 |
| per FTE Student | 5.4- 17.5 | 11.8 | 7.9-40.0 | 18.2 |

TABLE 4B REQUIRED

| Unit Measure | Academic Office Space | | Total Instructional Office Space | |
|---|---|---|---|---|
| | Range | Mean | Range | Mean |
| per FT Academic Staff | 120.0-187.7 | 143.1 | 185.5-282.2 | 223.4 |
| per FTE Academic Staff | 112.7-187.7 | 136.5 | 179.6-268.5 | 213.8 |
| per FTE Student | 7.1- 17.0 | 10.5 | 11.5- 24.3 | 16.5 |

The total office space per full-time equivalent student is higher for Education than for the five test universities under study by the Task Force on Space and Utilization, reflecting a lower student staff ratio as might be expected for a post first degree program. Since full-time equivalent students is the most convenient input measure of the three tested it was decided to adopt 16.5 sq.ft. per FTE student.

5) Library

Three subcategories (a) reading or study space (b) service space and (c) stack space were considered and two input measures (a) full-time equivalent students and (b) equivalent volumes. Reading, service and the sum of reading and service space were related to full-time equivalent students. Stack space was related only to equivalent volumes since the Task Force on Space and Utilization had previously found this to produce the best correlation.

TABLE 5A AVAILABLE

| Unit Measure | Reading-Study Space | | Service Space | | Reading plus Service | |
|---|---|---|---|---|---|---|
| | Range | Mean | Range | Mean | Range | Mean |
| per FTE Student | 1.5-5.9 | 3.0 | 0.7-4.2 | 2.2 | 2.7-9.0 | 5.1 |

TABLE 5B REQUIRED

| Unit Measure | Reading-Study Space | | Service Space | | Reading plus Service | |
|---|---|---|---|---|---|---|
| | Range | Mean | Range | Mean | Range | Mean |
| per FTE Student | 6.0-13.6 | 10.3 | 1.7-2.8 | 2.4 | 7.5-16.4 | 12.7 |

Faculties of Education have a unique role in addition to teaching and research which is to provide a bridge between pre-service and in-service training of teachers and to maintain a meaningful contact with teachers in the field. For example, libraries in faculties of Education have been planned as resource centres for practicing teachers working in schools in the geographic area served by the Faculty; people who would otherwise have no access to special education collections housed in the Faculty libraries. This fact alone requires a more generous space allocation than for a library serving only university students and faculty. This need is particularly emphasized in the summer term when large numbers of teachers (sometimes three to four times the number of regular winter students) return to the Faculty for study, thus placing heavy strains on library and other resources.

Education as a discipline, particularly with its emphasis on curriculum development, requires more non book resources which are bulky and which require more space than more traditional library collections.

Difficulty was experienced with this category in attempting to estimate what part of the central library should be included in that available to and required by Education. But, as pointed out above, since Education requires special library facilities in addition to those available centrally it was decided to adopt 12 sq.ft. per FTE student for reading plus service space in the central library and faculty library combined.

Space per equivalent volume available ranged from .02 sq.ft. to .24 sq.ft. with the mean at 0.05 sq.ft. and space per equivalent volume required from .08 sq.ft. to .25 sq.ft. with the mean at 0.16 sq.ft. It was agreed to adopt the sliding scale of space per volume ranging from 0.10 sq.ft. to 0.07 sq.ft. as proposed by the Task Force on Space and Utilization, since this scale has been well researched and has gained fairly wide acceptance.

6) Athletic and Recreational Athletic Space

Space available and required was related initially to three input measures (a) full-time equivalent students (b) full-time equivalent students plus full-time equivalent staff (c) population (b) plus departmental support staff, administrative staff and library staff. Since measures (b) and (c) would be more difficult to determine and predict and did not improve the space to population correlations these were abandoned.

TABLE 6

Athletic Space

| Unit Measure | Available | | Required | |
|---|---|---|---|---|
| | Range | Mean | Range | Mean |
| per FTE Student | 8.9-18.6 | 11.7 | 10.8-28.3 | 20.1 |

10.

Education requires athletic space for a teaching program requirement as well as a recreational requirement. No allowance was made for this under the laboratory category as might well have been justified, hence a larger factor than for the university as a whole is indicated. As further justification the demand arising out of summer courses is frequently much greater than that in the fall and winter. It was agreed to adopt 20 sq.ft. per FTE student.

7) Food Service

The same three input measures as for the previous category were considered but it was decided to use full-time equivalent students only, as explained above.

TABLE 7

Food Service Space

| Unit Measure | Available | | Required | |
|---|---|---|---|---|
| | Range | Mean | Range | Mean |
| per FTE Student | 1.8-10.8 | 5.4 | 4.5-15.7 | 8.5 |

It was decided to adopt 8.5 sq.ft. per FTE student. This figure was chosen primarily because of the conviction that most of the available facilities were quite inadequate.

8) Bookstore

This category was considered but since Education has no special requirements in this field the figure of 1.8 sq. ft. per FTE student originating with the Task Force on Space and Utilization was accepted.

9) Maintenance and Utility Plant

As for the previous category the factor proposed by Space and Utilization was accepted, namely 2 percent of the total gross university area.

10) Office Space (not elsewhere classified) and Related Space

This category presented a difficulty for Education in attempting to determine what general university administration space should be added to the Faculty administrative space. It was decided to examine only the administrative space within the Faculty itself. Office space proper and service space were first separated but this seemed to be unnecessary and total space was related to (a) full-time equivalent students and (b) administrative staff with the results shown in Table 10.

TABLE 10

ADMINISTRATIVE OFFICE SPACE

| Unit Measure | Available | | Required | |
|---|---|---|---|---|
| | Range | Mean | Range | Mean |
| per FTE Student | 2.3- 8.0 | 4.6 | 3.1- 8.2 | 5.4 |
| per Administrative Staff | 25.3- 384.6 | 178.3 | 142.9-384.6 | 210.5 |

Because of the difficulty referred to above it was decided to adopt the factor of 8.9 sq.ft. per FTE student to cover the university as opposed to the Faculty of Education requirement for space in this category. This was the figure proposed by Space and Utilization.

11) Academic Services

Space in this category was related to (a) full-time equivalent students (b) full-time equivalent academic staff and (c) the sum of (a) and (b), but it seemed best to use (a) only.

TABLE 11

ACADEMIC SERVICES SPACE

| Unit Measure | Available | | Required | |
|---|---|---|---|---|
| | Range | Mean | Range | Mean |
| per FTE Student | 0.8-1.1 | 1.1 | 0.9-2.8 | 2.1 |

It was agreed to adopt 2.1 sq.ft. per FTE student.

12) Central Services

This category is applicable to a university as a whole rather than to one faculty or division hence the factor 2.6 sq.ft. per FTE student proposed by Space and Utilization was accepted.

13) Services to Students

This space category was related to full-time equivalent students only.

TABLE 13

SERVICES TO STUDENTS SPACE

| Unit Measure | Available | | Required | |
|---|---|---|---|---|
| | Range | Mean | Range | Mean |
| per FTE Student | 0.06-1.4 | 0.5 | 0.3-1.2 | 0.5 |

It was agreed to adopt 0.5 sq.ft. per FTE student for this category since available space was felt to be no more than adequate.

14) Common Use and Student Activity Space

This category presents the difficulty of making allowance for space elsewhere in the university and the figures reported tend to reflect only what was available and required within the Faculty buildings. Two input measures were considered (a) full-time equivalent students and (b) full-time equivalent students plus all staff.

TABLE 14

COMMON USE AND STUDENT ACTIVITY SPACE

| Unit Measure | Available | | Required | |
|---|---|---|---|---|
| | Range | Mean | Range | Mean |
| per FTE Student | 0.4-5.4 | 2.2 | 2.2-10.6 | 4.9 |
| per (FTE Student and Staff) | 0.3-5.0 | 1.9 | 2.0- 9.7 | 4.3 |

Because of the uncertainty as to how much space to add for the rest of the university it was decided to accept the figure 6.2 sq.ft. per FTE student proposed by Space and Utilization.

15) Assembly and Exhibition Facilities

Space in this category was related to full-time equivalent students only.

TABLE 15

ASSEMBLY AND EXHIBITION FACILITIES SPACE

| Unit Measure | Available | | Required | |
|---|---|---|---|---|
| | Range | Mean | Range | Mean |
| per FTE Student | 3.1-11.7 | 6.5 | 6.0-14.6 | 8.4 |

It is felt to be important for the program in Education to have a large assembly area where all or a considerable segment of the student body can be gathered together at one time. The factor 8.4 sq.ft. per FTE student was adopted.

16) Non-Formula Space

Space for facilities such as laboratory schools e.g. U.T.S., and the St. George's Nursery School and the Guidance Center were assumed to fall in this category together with the other spaces falling in this category as set forth in Appendix B. This category was not considered by this task force since it was felt that there would not be enough similarity from one institution to another to warrant an attempt to produce a common factor for all.

Relationship to Interim Formula Weights.

Summing the factors above produces a combined figure of 147.2 net assignable square feet per full-time equivalent student for Education. To this must be added a figure for the stack space, based on the number of equivalent volumes held, plus an additional 2 percent for Maintenance and Utility Plant. Taking a very rough figure of 12 sq.ft. per student for stack space and increasing the total by a further 2 percent produces an approximate figure of 162 sq.ft. per full-time equivalent student.

It might seem at first sight that one could divide 162 by 96 to get the correct weighting for Education under the interim formula. This is not a valid procedure, however, for the following reasons:

1) the weights of the interim capital formula include the cost factor. The figure 147.2 augmented by stack space and maintenance and Utility Plant space does not.

2) this is the first discipline for which a capital formula factor has been derived by the methodology described above.

If this methodology were applied to those disciplines whose students carry unit weight in the interim formula, it is quite unlikely that the factor 96 square feet per full-time equivalent student would result.

3) In the interim formula the factor 96 square feet really applies to full-time students only. The corresponding factor for the full-time equivalent of part-time students is 24 square feet.

It should be possible to derive a more appropriate relative weight for interim formula purposes when the other task forces have reported. At that time, space factors produced by the same methodology will be available for other disciplines from the Task Force on Space and Utilization and cost factors from the Task Force on Building Costs.

Concluding Remarks.

As was pointed out in the introduction, no consideration is given to the cost of building space for Education in this report. The factors derived relate to space and utilization only. A unit cost component would have to be added if a formula incorporating cost, space and utilization is required.

The space required for laboratory schools, such as UTS and the St. George's school at Toronto and facilities like the Guidance Centre was not included in this study hence the recommended factors would not provide sufficient space to accommodate these types of activities.

The factors derived are intended primarily for new facilities to accommodate additional enrolments, or to replace outmoded facilities, and reflect the efficiency to be expected in new buildings. There is much space in buildings not due for replacement but constructed under less stringent standards. It would make little sense to spend large sums of money to remodel this space to bring it more in line with what is permitted now but an allowance should be made for this situation if the new standards are applied retroactively.

Universities or faculties within them may decide for perfectly valid reasons to cease growing in terms of enrolment, thus cutting off or drastically reducing entitlement for capital funds under a formula which ties funds mainly or entirely to enrolment. A static enrolment does not, however, remove the need for capital funds if the university or faculty is to maintain sufficient flexibility to initiate changes or to react to changing needs and methodologies. It seems likely that serious consideration will need to be given to the problems of a "steady state" situation as it relates to capital and operating costs in the near future.

Finally it is to be hoped that no formula or the factors which go into its make-up will ever be regarded as final. As mentioned above and earlier in this report, conditions are changing and it seems obvious that there will be a need for periodic review of the input measures, space, cost and utilization factors and the bases of their derivation.

# APPENDICES

# APPENDIX A

## MEMBERSHIP

Appendix A

| Institution | Member | Resource Personnel |
|---|---|---|
| Brock University | P. Ind | |
| Lakehead University | C.H.M. Smith | |
| Ottawa University | J. Tessier | Mrs. P. White |
| Queen's University | V.S. Ready | K.H. McKibbin<br>P. Watts |
| University of Toronto | D.F. Dadson | G.B. Bailey<br>H. Barrett |
| University of Western Ontario | T.J. Casaubon | H.J. Schulz |
| University of Windsor | R. Deveraux | A.M. Marshall |
| York University | A.R. Dawson | |
| Committee on Capital Financing | K.S. Gregory<br>G.R. Love | |
| COU | | I.W. Thompson<br>Miss S.C. Cale |

# APPENDIX B

## SPACE CLASSIFICATION SCHEME

1. CLASSROOM FACILITIES (Lecture, Seminar and Tutorial)

Definition: A room used by classes which do not require specialized equipment for student use or a room which directly serves a classroom as an extension of the activities of the classroom.

Description: Included in this category are rooms generally referred to as lecture rooms, tutorial rooms, seminar rooms, and general purpose classrooms. A Classroom may be equipped with tablet arm chairs (fixed to the floor, joined together in groups, or flexible in arrangement), tables and chairs (as in a seminar room), or similar types of seating. A Classroom may be furnished with special equipment appropriate to a specific area of study if this equipment does not render the room unsuitable for use by classes in other areas of study.

Included in this category are projection rooms, cloak rooms, preparation rooms, closets, storage, and non-scheduled computation rooms if they serve a classroom.

Limitations: This category does NOT include conference rooms, auditoriums, or laboratories. Conference rooms are distinguished from seminar rooms on the basis of primary use; a room with tables and chairs which is used primarily for meetings (as opposed to classes) is a Conference Room. Auditoriums are distinguished from lecture rooms on the basis of primary use; a large room with seating oriented toward some focal point which is used for dramatic or musical productions, or for general meetings is an Assembly Facility (i.e., an auditorium normally used for other than scheduled classes). Laboratories are distinguished from classrooms on the basis of equipment in the room and by its limited use; a room with specialized equipment such as laboratory benches, typewriters, desk calculators, drafting tables, musical equipment, (instructional) shop equipment, etc., which is used for instructional purposes is a Laboratory.

This category does NOT include projection rooms, cloak rooms, preparation rooms, closets, storage, and computation rooms, if such rooms serve laboratories, conference rooms assembly facilities, etc. A projection booth in an auditorium is classified as Assembly Facilities Service.

TLH CLASSIFICATION: The following are the TLH classifications and codes which correspond to this category;

| | |
|---|---|
| lecture-theater | 11000 |
| regular classrooms | 12000 |
| seminar rooms | 13000 |
| service area | 17000 |
| computation room | 18000 |
| other | 19000 |

2. LABORATORY (undergraduate)

Definition: A room used by classes which require special-purpose equipment for student participation, experimentation, observation, or practice in a field of study, or a room which serves a laboratory as an extension of the activi . of the laboratory.

Description: A Laboratory is designed and/or furnished with specialized equipment to serve the needs of a particular area of study for group instruction in regularly scheduled classes. The design and/or equipment in such a room normally precludes its use for other areas of study. Included in this category are rooms generally referred to as teaching laboratories, instructional shops, typing laboratories, drafting rooms, music practice rooms, language laboratories, studios, computation laboratories, laboratory display rooms (including museums and art galleries which serve departments), and similar specially designed and/or equipped rooms IF they are used primarily for group instruction in regularly scheduled classis.

Included in this category are balance rooms, controlled environment rooms, stock rooms, dark rooms, equipment issue rooms, animal holding rooms, greenhouses, computation rooms, service shops (including areas such as machine shops and glass blowing areas which serve a laboratory), and similar facilities which serve a laboratory.

Limitations: This category does NOT include rooms generally referred to as research laboratories. It does NOT include gymnasiums, pools, drill halls, teaching clinics, demonstration houses, and similar facilities which are included under other categories.

This category does NOT include balance rooms, controlled environment rooms, stock rooms, dark rooms, animal holding rooms, greenhouses, computation rooms, service shops etc. which do not serve a Laboratory.

TLH CLASSIFICATION: The following are the TLH classifications and codes which correspond to this category;

| | |
|---|---|
| project space-undergraduate | 20430 |
| class laboratories | 21000 |
| special class laboratories | 22700 |
| large-scale equipment* | 23000 |
| small-scale equipment* | 24000 |
| suites of facilities* | 25000 |
| studios and shops* | 26000 |
| service* | 27000 |
| demonstration facilities | 67000 |
| field service facilities | 69000 |

* that portion which is applicable to Laboratory (undergraduate) space.

3. LABORATORY (Graduate and Faculty)

Definition: A room used for laboratory applications, research, and/or training in research methodology which requires special-purpose equipment for staff and/or student experimentation or observation or a room which directly services a laboratory of this type as an extension of the activities of the laboratory.

Description: Included in this category are rooms generally referred to as research laboratories, or studios and music practice rooms for work at the graduate level.

Also included in this category are balance rooms, controlled environment rooms, stock rooms, dark rooms, animal rooms, greenhouses, laboratory service shops (machine shops, glass blowing), etc. which serve a Laboratory of this type.

Limitations: This category does NOT include rooms generally referred to as teaching laboratories.

This category does NOT include balance rooms, controlled environment rooms, stock rooms, dark rooms, animal rooms, greenhouses, etc., which serve a Laboratory (undergraduate).

TLH CLASSIFICATION: The following are the TLH classifications and codes which correspond to this category;

| | | |
|---|---|---|
| project space | - faculty | 20100 |
| | - other professional | 20200 |
| | - research assistant | 20410 |
| | - other graduate | 20420 |
| | - technical staff | 20500 |
| | - other | 20900 |
| large-scale equipment* | | 23000 |
| small-scale equipment* | | 24000 |
| suites of facilities* | | 25000 |
| studios and shops* | | 26000 |
| service* | | 27000 |

* that directly serve laboratories in this category

4. INSTRUCTIONAL STAFF OFFICES and RELATED SPACE

Definition: A room used by faculty, departmental administrative staff, or students working at a desk (or table) or a room which serves an office (or group of offices) as an extension of the activities in an office.

Description: Included in this category are rooms generally referred to as faculty offices, departmental administrative offices, graduate assistant offices, teaching assistant offices, student offices, etc. Also included in this category is a Studio (music, art, etc.) if such a room serves as an office for a staff member. (A Studio intended to serve a group of students is classified as Class Laboratory (undergraduate)). An Office typically is equipped with one or more desks, chairs, tables, bookcases, and/or filing cabinets.

Included in this category are departmental reading rooms, file rooms, departmental or faculty conference facilities, faculty lounges, mimeograph rooms, vaults, waiting rooms, interview rooms, closets, private toilets, records rooms, and office supply rooms.

Limitations: This category does NOT include rooms which are equipped both as office and "research laboratory". A room equipped with laboratory benches, specialized scientific equipment, and/or such utilities as gas, water, steam, air, etc., is classified as a laboratory. Note that this distinction rests on equipment rather than function. It is recommended that those rooms which have office type equipment and fixed laboratory type equipment (primarily in the biological and physical sciences) within the same room be classified within a laboratory category. Large rooms, such as glass shops, printing shops, reading rooms, research laboratories, etc., which have a desk space for a technician or staff member are classified according to the primary purpose of the room rather than Office.

This category does NOT include centralized mimeograph and printing shops.

TLH CLASSIFICATIONS: The following are the TLH classifications and codes which correspond to this category:

| | |
|---|---|
| faculty office | 31000(except 31100, 31400) |
| student office | 32000(except 32500) |
| supporting technical (1) | 33000(except 33200) |
| supporting clerical (1) | 34000 |
| service (2) | 37000 |
| conference (2) | 38000 |
| lounge (3) | 75000 |

(1) departmental staff only
(2) serving departmental space
(3) faculty lounges only

5. LIBRARY

(a) STACK SPACE

Definition: A room (or portion of a room) used to provide shelving for books and other library material used by staff and/or students on an individual basis.

Description: Included in this category are rooms generally referred to as library stacks.

Limitations: This category does NOT include book-shelf space in Classrooms, Laboratories, or Offices. Audio-visual film and tape libraries which generally serve groups (rather than individuals) are classified as AV-Radio-TV Facilities. Separate tape storage rooms for language laboratories should be classified as Laboratory Service. Separate rooms containing musical scores, records and tapes are classified as Stack if the primary purpose of the materials is for instruction or research (as in a Library or Music Building). Rooms containing such materials and intended for listening enjoyment (as in a Student Union) should be classified as Student Activity space.

(b) STUDY SPACE

Definition: A room used to study books or audio-visual materials on an individual basis or a room which is a combination of Study Room and Stack, generally without physical boundaries between the stack areas and the study areas.

Description: Included in this category are rooms generally referred to as library reading rooms, carrels, study rooms, individual study stations, study booths, and similar rooms which are intended for general study purposes. Study stations may be grouped (as in a library reading room) or individualized (as in a carrel).

Included in this category are rooms generally referred to as open-stack reading rooms.

Limitations: This category does NOT include Individual Study Laboratories. An Individual Study Laboratory is limited in use to a particular area of study, while a Study Room is intended for general study (or a broad area of study). This category does NOT include Classrooms, Laboratories (undergraduate), Laboratories (graduate and faculty), Research Laboratories, Offices, combined sleeping-study rooms in residence halls or other housing units, waiting rooms or lounges outside the control desk.

(c) LIBRARY SERVICE SPACE

Definition: A room which serves a Reading Room, Stack, or Open-Stack Reading Room as a supporting service to such rooms. A room which directly serves a Library Processing Room as a direct extension of the activities in such a room.

Description: Included in this category are rooms generally referred to as card catalog, circulation desk, bookbinding, microfilm processing, and audio-visual record-playback equipment for distribution to individual study stations. Also included are such areas as closets, locker space, coatrooms, etc.

Offices for library staff, acquisitions work areas, are also to be included in this category. Staff lounges are included if they are inside the control desk.

TLH CLASSIFICATION: The following are the TLH classifications and codes which correspond to this category;

| | |
|---|---|
| library study facilities | 40000 |

6. ATHLETICS and RECREATIONAL ATHLETIC SPACE

Definition: A room ( or other indoor area) used by students, staff, or the public for athletic activities. The seating area used by students, staff or the public to watch athletic events. Any room which directly serves an athletic or physical education facility as an extension of the activities in such a facility.

Description: Included in this category are rooms generally referred to as gymnasiums, basketball courts, handball courts, squash courts, wrestling rooms, swimming pools, ice rinks, (indoor), indoor tracks, indoor "fields", fieldhouses, and broadcasting and press box facilities.

Included in this category are rooms generally referred to as locker rooms, shower rooms, coaches rooms, ticket booths, dressing rooms, equipment supply rooms, first aid rooms, skate sharpening rooms, towel rooms, etc.

Included in this category are permanent seating areas in fieldhouses, gymnasiums, and natatoria.

Limitations: No distinction is made on the basis of instructional versus intramural or intercollegiate use of gymnasiums, swimming pools, etc. (Institutions which wish to study the utilization of such facilities will need to further subdivide this category.) This category does NOT include Classrooms or Laboratories, even though they may be located in an Athletic building. It does NOT include outside facilities such as tennis courts, archery ranges, etc.

Offices and office related space which serve directly the athletic facilities are not included here but instead classified in category 10 office space.

TLH CLASSIFICATION: The following are the TLH classifications and codes which correspond to this category;

athletic-physical education facilities 50000

7. FOOD SERVICE

Definition: A room used for eating food or which directly serves a Food Facility as an extension of the activities in such a facility.

Description: This category includes dining halls (including those in residences), cafeterias, snack bars, restaurants, and similar eating areas.

This category includes such areas as kitchens, refrigeration rooms, freezers, dishwashing rooms, cafeteria serving areas, and other non-dining areas.

Limitations: This category does NOT include office space and office related space which directly serves food service facilities.

TLH CLASSIFICATION: The following are the TLH classifications and codes which correspond to this category;

| | |
|---|---|
| food facilities | 73000 |
| food service space (residences) | 91000 |

8. BOOKSTORE, etcetera

Definition: A room (or group of rooms) used to sell products or services or a room which directly services a merchandising facility as an extension of the activities in that room.

Description: This category includes such rooms as bookstores, barber shops, post offices, dairy stores, laundry rooms, and other merchandising areas.

Included in the category are rooms generally referred to as supply closets, linen rooms, valet service etc. serving this class of facilities.

Limitations: This category does NOT include dining rooms, restaurants, snack bars, and similar Food Facilities. It does NOT include meeting rooms which are classified as Conference Rooms. Mail sorting rooms for university mail are also excluded. Office and office related space serving this category in excluded. Space not included in the Allocation Inventory is also to be excluded from this category.

TLH CLASSIFICATION: The following are the TLH classifications and codes which correspond to this category;

| | |
|---|---|
| merchandising facilities | 76000 |

9. MAINTENANCE and UTILITY PLANT

Definition: Space used for the operation and maintenance of the physical plant. This would include a room used for the manufacture or maintenance of products and equipment. A room which directly serves a shop as an extension of the activities in such a room. A room used to store materials. A room which directly serves a storage facility. A room (or structure) used to store or service vehicles.

Description: This category includes such rooms as carpenter shops, plumbing shops, electrical shops, painting shops, and similar trade shops. It also includes central heating and refrigeration, maintenance greenhouses.

Included in this category are tool supply-storage rooms, materials storage rooms, and similar equipment or material supply and/or storage rooms. Locker rooms, shower rooms, lunch rooms, and similar non-public areas should be included.

Classification of a room as a Storage Facility is limited by definition to a central storage facility (warehouse). Storage related to other types of space follow the classification of that type of space with a "service" designation. For example, a storage closet for office supplies is classified as Office Service. The distinction between a "service" classification and "storage" rests on the possibility of physical separation of the materials stored. If the material being stored could be placed in a warehouse, implying only occasional demand for the materials, then Storage Facility is the appropriate classification. Storage which must, by the nature of the materials stored and the demands placed upon them by the program, be close at hand should be classified according to the appropriate "Service" category.

This category includes rooms (or structures) generally referred to as garages, boat houses, airport hangars, and other storage areas for vehicles (broadly defined).

This category includes any area associated with a Vehicle Storage facility which is used for the maintenance and repair of automotive equipment, boats, airplanes, and similar vehicles.

Limitations: This category does NOT include instructional shops; industrial arts and vocational-technical shops used for instruction should be classified as Laboratories. Highly specialized shops for the production of scientific apparatus and equipment should be classified as Laboratory Service. Materials preparation areas in Audio-Visual, Radio Stations, and TV Studios should be classified as Academic Service space.

This category does NOT include portions of barns or similar field-Service Facilities which are used to house farm implements, or parking areas. Offices and office related space serving this category are excluded. Locker rooms, shower rooms, and lunch rooms for custodial staff are non-assignable and therefore are excluded from this category.

TLH CLASSIFICATION: The following are the TLH classifications and codes which correspond to this category;

| | |
|---|---|
| non assignable (1) | 00000 |
| physical plant maintenance and operations | 84000 (except 84200) |

(1) central mechanical only

10. OFFICE SPACE (not elsewhere classified) and RELATED SPACE

Definition: A room used by administrative staff (not elsewhere classified) working at a desk (or table) or a room which serves an office (or groups of offices) as an extension of the activities in an office.

Description: Included in this category is all office space not excluded by the limitations.

Included are file rooms, mimeograph rooms, vaults, waiting rooms, interview rooms, closets, private toilets records rooms, office supply rooms, and conference facilities.

Limitations: This category does NOT include centralized mimeograph and printing shops. Academic offices, departmental support staff offices, library offices, student offices and related office space are not included in this category.

TLH CLASSIFICATION: The following are the TLH classifications and codes which correspond to this category;

| | |
|---|---|
| professional, other offices | 31400 |
| executive office facilities | 31100 |
| audio visual offices | 33200 |
| support clerical(1) | 34000 |
| service | 37000 |
| conference | 38000 |
| lounge(2) | 75000 |

(1) except departmental
(2) which serves offices - this category.

11. ACADEMIC SERVICES

Definition: A room or group of rooms used in the production and distribution of instructional media or a room which directly serves an A.V. radio or T.V. facility as an extension of the activities in such facilities.

Description: This category includes rooms generally referred to as TV studios, radio studios, sound studios, graphics studios, and similar rooms.

Limitations: Studios used primarily as part of an instructional program to train students in communication techniques should be classified as Laboratories. Offices and office related space serving this category are not classified in this category. Areas for printing instructional media are to be classified in category 12 (Central Services).

TLH CLASSIFICATION: The following are the TLH classifications and codes which correspond to this category;

| | |
|---|---|
| audio visual | 63000 |

12. CENTRAL SERVICES

Definition: A central facility serving the general need of the university. A room (or group of rooms) for university wide processing of data by machines or computers. A room which directly serves a data processing-computer facility as an extension of the activities of that facility.

Description: This category includes laundry rooms, drying rooms, ironing rooms, etc., located in a Central Laundry. It also includes central printing and duplicating shops, central receiving and central stores.

This category includes keypunch rooms, electronic data processing rooms, electronic computer rooms, and similar data processing areas.

This category includes such rooms as card storage, paper form storage, tape storage, tape storage vaults, control rooms, plugboard storage, wiring rooms, equipment repair rooms, observation rooms, and similar service areas.

Limitations: Laundry rooms, drying rooms, ironing rooms, etc., NOT located in a Central Laundry are classified as Residential Facilities or as a Service facility to whatever type of space they serve.

This category does NOT include rooms containing desk calculators, posting-billing machines, check-writing machines, and similar Office Service rooms. It is recommended that the area occupied by a keypunch machine sorter, or other EDP equipment in a room otherwise classifiable as an Office NOT be assigned to this category. A data processing facility used only for instruction should be classified as a Laboratory. Such a facility used for instruction and/or research and/or administrative data processing should be included in this category. Office and office related space is excluded from this category.

TLH CLASSIFICATION: The following are the TLH classifications and codes which correspond to this category;

| | |
|---|---|
| data processing | 81000 |
| central stores | 84200 |
| shop facilities | 82000 |

13. SERVICES TO STUDENTS

Definition: Facilities provided by the institution to serve the general student population.

Description: Included in this category are such rooms as dispensaries, record rooms, waiting rooms, scrub-up rooms, linen closets, examination rooms, bedrooms, and surgery rooms.

Limitations: Office and office related space is excluded from this category.

TLH CLASSIFICATION: The following are the TLH classifications and codes which correspond to this category;

| | |
|---|---|
| clinic facilities | 65000 |

14. COMMON USE SPACE and STUDENT ACTIVITY SPACE

Definition: A room used for recreational purposes. A room used for rest and relaxation. A room which directly serves as an extension of the activities of these facilities.

Description: This category includes such rooms as bowling alleys, pool and billiards rooms, ping pong rooms, ballrooms, chess rooms, card-playing rooms, (non-instructional) music listening rooms, and hobby rooms. Also included are student clubs, student government offices, common rooms, general lounge areas, and general use lockers not directly serving specific rooms.

This category includes storage closets, equipment issue rooms, cashiers desk, and similar areas.

The faculty club lounges and games areas are also to be included in this category.

Limitations: This category does NOT include gymnasiums, basketball courts, handball courts, squash courts, wrestling rooms, swimming pools, ice rinks, indoor tracks, indoor fields, or field houses, which should be classified as Athletic-Physical Education Facilities. It does NOT include outside facilities such as tennis courts, archery ranges, fields (football, hockey, etc.) or golf courses. Departmental lounges are excluded from this category.

TLH CLASSIFICATION: The following are the TLH classifications and codes which correspond to this category;

| | |
|---|---|
| lounge facilities(1) | 75000 |
| recreation | 77000 |
| Student enterprises | 32500 |

(1) serving offices in this category

NOTE: lounges in residences which serve the general student population are included in this category.

15. ASSEMBLY and EXHIBITION FACILITIES

Definition: A room designed and equipped for dramatic, musical or devotional activities. Rooms used for exhibits. Associated service areas.

Description: This category includes rooms generally referred to as theaters, auditoriums, concert halls, chapels, and convocation halls. Seating area, stage, orchestra pit and chancel are also included.

This category includes museums, art galleries, and similar exhibition areas.

This category includes check rooms, coat rooms, ticket booths, dressing rooms, projection booths, property storage, make-up rooms, costume storage, green rooms, control rooms, which serve space in this category.

Limitations: Study collections NOT primarily for general exhibition such as departmental displays of anthropological, botanical, or geological specimens should be classified under an appropriate Laboratory Facility category.

TLH CLASSIFICATION: The following are the TLH classifications and codes which correspond to this category;

| | |
|---|---|
| assembly facilities | 71000 |
| exhibition facilities | 72000 |
| chapel | 14000 |

16. NON-FORMULA SPACE

- includes health science facilities
  animal care facilities
  residences
  day care facilities
  commercial space which is rented out
  laboratory schools

# APPENDIX C

## INPUT MEASURES

Appendix C

| Space Category | Input Measures Examined |
|---|---|
| 1) Classroom Facilities | - stations<br>- full-time equivalent students<br>- non-laboratory student contact hours per week |
| 2)& 3) Laboratory Undergraduate, Graduate | - stations<br>- full-time equivalent students<br>- laboratory student contact hours per week |
| 4) Instructional Staff Offices and Related Spaces | - full-time academic staff<br>- full-time equivalent academic staff<br>- full-time equivalent students |
| 5) Library | - full-time equivalent students<br>- equivalent volumes |
| 6) Athletic and Recreational Athletic Space | - full-time equivalent students<br>- above plus full-time equivalent staff<br>- above plus departmental support staff, administrative staff and library staff |
| 7) Food Service Space | - same as for Athletics above |
| 8) Bookstore | - not studied in detail |
| 9) Maintenance and Utility Plant | - not studied in detail |
| 10) Office Space (not elsewhere classified) and Related Space | - full-time equivalent students<br>- administrative staff |
| 11) Academic Services | - full-time equivalent students<br>- full-time equivalent academic staff |
| 12) Central Services | - full-time equivalent students |
| 13) Services to Students | - full-time equivalent students |
| 14) Common Use and Student Activity Space | - full-time equivalent students<br>- above plus all staff |
| 15) Assembly and Exhibition Facilities | - full-time equivalent students |
| 16) Non-Formula Space | - not studied |

APPENDIX D

DATA COLLECTION FORMS

(AVAILABLE)

Appendix D

TASK FORCE - SPACE and UTILIZATION

DATA COLLECTION FORMS

(AVAILABLE)

September 16, 1971

UNIVERSITY _____

## UNIVERSITY DATA[1] - SPACE and UTILIZATION

| SPACE CLASSIFICATION | TLH CATEGORY | NET ASSIGNABLE SQUARE FEET | STATIONS |
|---|---|---|---|
| Classroom | 11000, 12000 | | |
| | 13000 | | |
| | 17000,18000,19000 | | - |
| Library | 41000, 42000, 75000[2] | | |
| | 43000 | | - |
| | 30000,44000,45000, 46000,75000 | | - |
| Athletics and Recreational Athletic space | 50000, 61000[3] | | - |
| Food Service | 73000 | | |
| | 91000 | | |
| Bookstore, etcetera | 76000[4] | | - |
| Maintenance and Utility Plant | 84000[5] | | - |
| | 01300[6] | | |
| Office space (not elsewhere classified) and Related space | 31100,31400,33000,[7] 34000[8],35000 | | - |
| | 37000[9],38000[9], 75000[10] | | - |
| Academic services | 63000 | | - |
| Central services | 81000 | | - |
| | 82000, 84200 | | - |
| Service to Students | 65000 | | - |
| Common use space and student activity space | 32500, 75000[10] | | - |
| | 61000 | | - |
| | 75000[11] | | - |
| | 77000 | | |
| Assembly and exhibition facilities | 14000 | | - |
| | 71000 | | |
| | 72000 | | - |
| Non-formula | - | | - |

Scheduled weekly hours of operation (classroom facilities)- _____

1. except where noted all data is to be reported as of December 1, 1970.
2. student lounges within control area of the library
3. indoor rifle ranges only
4. note how much of the space is Bookstore proper
5. except 84200
6. central mechanical only
7. except those offices for persons in the position series 2000 and 2300-2400 series
8. except those offices for departmental support staff
9. except space servicing departmental office facilities
10. serving office facilities in this category
11. except those lounges serving offices in categories 4, 5, 10 and 14a.

DEPARTMENTAL DATA[1] - SPACE and UTILIZATION

| DEPARTMENT | LABORATORY (UNDERGRADUATE) | | | | LABORATORY (GRADUATE and FACULTY) | |
|---|---|---|---|---|---|---|
| | 20430, 21000, 22700, 67000, 69000 | | 23000[2], 24000[2], 25000[2], 26000[2], 27000[2] | Scheduled Hours of Operation Per Week | 20100, 20200, 20410, 20420, 20500, 20900 | 23000[2], 24000[2], 25000[2], 26000[2], 27000[2] |
| | SQUARE FEET | STATIONS | SQUARE FEET | | SQUARE FEET | SQUARE FEET |
| | | | | | | |
| UNCLASSIFIED | | | | | | |
| TOTAL | | | | | | |

1. except where noted all data is to be reported as of December 1, 1970.
2. which serves laboratories in this category. If it is not possible to prorate this space between laboratory (undergraduate) and laboratory (graduate and faculty) then include all space in these categories under service space for laboratory (undergraduate).

Scheduled weekly hours of operation (U.G. laboratory facilities) _____

UNIVERSITY _____

DEPARTMENTAL DATA[1] - SPACE and UTILIZATION

| DEPARTMENT | OFFICE SPACE | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | ACADEMIC (TEACHING) STAFF | | STUDENT | | DEPARTMENTAL SUPPORT STAFF | | SERVICE, CONFERENCE, LOUNGE | |
| | 31000[2] | | 32000[3] | | 33000[4], 34000[5] | | 37000[6], 38000[6], 75000[6] | |
| | SQUARE FEET | STN. | SQUARE FEET | STN. | SQUARE FEET | STN. | SQUARE FEET | STN. |
| | | | | | | | | |
| UNCLASSIFIED | | | | | | | | |
| TOTAL | | | | | | | | |

1. except where noted all data is to be reported as of December 1, 1970.
2. except 31100 and 31400
3. except 32500
4. for persons in the postion series 2000 and 2300-2400 series
5. office space for departmental support staff only
6. serving office facilities in this category.

## UNIVERSITY DATA[1] - INPUT MEASURES

1. Weekly student contact hours

   - to be reported on the form attached

2. Departmental Data

   - to be reported on the form attached

3. Classified FTE Enrolment

   - not necessary to report this data. This information will we extracted from the UA-3 enrolment reporting forms.

4. Non-academic (non-teaching) staff

   - headcount of all non-academic (non-teaching) staff from all payrolls for the pay period ending November 30, 1970 and excluding departmental support staff and library staff.

   NUMBER OF PERSONS[2] - _____

5. Library staff

   - to be calculated as in section 3 above

   LIBRARY STAFF - _____

6. Equivalent volumes

   - to be calculated as per the California standards reproduced below:

| | | | |
|---|---|---|---|
| 1000 | documents and pamphlets | = 125 volumes | _____ |
| 400 | microfilm reels | = 125 volumes | _____ |
| 10,000 | microfilm cards, prints | = 125 volumes | _____ |
| 7 | newspapers - unbound display | = 125 volumes | _____ |
| 9 | - back files | = 125 volumes | _____ |
| 15 | periodicals - unbound display | = 210 volumes | _____ |
| 30 | - boxed | = 125 volumes | _____ |
| 500 | recording discs | = 125 volumes | _____ |
| 1 | book | = 1 volume | _____ |

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1. except where noted all data is to be reported as of December 1, 1970.
2. If possible note number of persons employed temporarily.

UNIVERSITY_____

DEPARTMENTAL DATA - INPUT MEASURES

| DEPARTMENT | CLASSROOMS SEMINARS TUTORIALS WEEKLY STUDENT CONTACT HOURS | | LABORATOR WEEKLY STUDENT CONTACT HOUR | TOTAL BY DEPARTMENT |
|---|---|---|---|---|
| | CLASSROOMS | SEMINARS & TUTORIALS | | |
| | | | | |
| UNCLASSIFIED | | | | |
| TOTAL | | | | |

## DEPARTMENTAL DATA[1] - INPUT MEASURES

| DEPARTMENT | FULL-TIME ACADEMIC (TEACHING) | FTE OF PART-TIME ACADEMIC (TEACHING) STAFF[2] | DEPARTMENTAL SUPPORT STAFF[3] | FULL-TIME GRADUATES | | FTE OF PART-TIME GRADUATE[4] |
|---|---|---|---|---|---|---|
| | | | | GRAD. | PDF* | |
| | | | | | | |
| UNCLASSIFIED | | | | | | |
| TOTAL | | | | | | |

1. except where noted all data is to be reported as of December 1, 1970.
2. calculated as per DUA instructions on the UA-1 forms (includes graduate and others who teach, demonstrators)
3. headcount of all non-academic (teaching) staff from all payrolls for the pay period ending November 30, 1970 and including only departmental support staff (such as technicians, laboratory assistants, markers, animal attendants).
4. calculated as per DUA instructions on the UA-3 enrolment reporting forms.

* Post-doctoral fellow

APPENDIX E

DATA COLLECTION FORMS

(REQUIRED)

TASK FORCE - SPACE and UTILIZATION

DATA COLLECTION FORMS

(REQUIRED)

September 16, 1971

UNIVERSITY _____

UNIVERSITY DATA[1] - SPACE and UTILIZATION

| SPACE CLASSIFICATION | TLH CATEGORY | NET ASSIGNABLE SQUARE FEET | STATIONS |
|---|---|---|---|
| Classroom | 11000, 12000 | | |
| | 13000 | | |
| | 17000,18000,19000 | | - |
| Library | 41000, 42000, 75000[2] | | |
| | 43000 | | - |
| | 30000,44000,45000, 46000,75000 | | - |
| Athletics and Recreational Athletic space | 50000, 61000[3] | | - |
| Food Service | 73000 | | |
| | 91000 | | |
| Bookstore, etcetera | 76000[4] | | - |
| Maintenance and Utility Plant | 84000[5] | | - |
| | 01300[6] | | |
| Office space (not elsewhere classified) and Related space | 31100,31400,33000,[7] 34000[8],35000 | | - |
| | 37000[9],38000[9], 75000[10] | | - |
| Academic services | 63000 | | - |
| Central services | 81000 | | - |
| | 82000, 84200 | | - |
| Service to Students | 65000 | | - |
| Common use space and student activity space | 32500, 75000[10] | | - |
| | 61000 | | - |
| | 75000[11] | | - |
| | 77000 | | |
| Assembly and exhibition facilities | 14000 | | - |
| | 71000 | | |
| | 72000 | | - |
| Non-formula | - | | - |

Scheduled weekly hours of operation (classroom facilities)- _____

1. except where noted all data is to be reported as of December 1, 1970.
2. student lounges within control area of the library
3. indoor rifle ranges only
4. note how much of the space is Bookstore proper
5. except 84200
6. central mechanical only
7. except those offices for persons in the position series 2000 and 2300-2400 series
8. except those offices for departmental support staff
9. except space servicing departmental office facilities
10. serving office facilities in this category
11. except those lounges serving offices in categories 4, 5, 10 and 14a.

DEPARTMENTAL DATA[1] - SPACE and UTILIZATION

| DEPARTMENT | LABORATORY (UNDERGRADUATE) | | | | LABORATORY (GRADUATE and FACULTY) | |
|---|---|---|---|---|---|---|
| | 20430, 21000, 22700, 67000, 69000 | | 23000[2], 24000[2], 25000[2], 26000[2], 27000[2] | Scheduled Hours of Operation Per Week | 20100, 20200, 20410, 20420, 20500, 20900 | 23000[2], 24000[2], 25000[2], 26000[2], 27000[2] |
| | SQUARE FEET | STATIONS | SQUARE FEET | | SQUARE FEET | SQUARE FEET |
| | | | | | | |
| UNCLASSIFIED | | | | | | |
| TOTAL | | | | | | |

1. except where noted all data is to be reported as of December 1, 1970.
2. which serves laboratories in this category. If it is not possible to prorate this space between laboratory (undergraduate) and laboratory (graduate and faculty) then include all space in these categories under service space for laboratory (undergraduate).

Scheduled weekly hours of operation (U.G. laboratory facilities) _____

UNIVERSITY _____

DEPARTMENTAL DATA[1] - SPACE and UTILIZATION

| DEPARTMENT | OFFICE SPACE | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | ACADEMIC (TEACHING) STAFF | | STUDENT | | DEPARTMENTAL SUPPORT STAFF | | SERVICE, CONFERENCE, LOUNGE | |
| | 31000[2] | | 32000[3] | | 33000[4], 34000[5] | | 37000[6], 38000[6], 75000[6] | |
| | SQUARE FEET | STN. | SQUARE FEET | STN. | SQUARE FEET | STN. | SQUARE FEET | STN. |
| | | | | | | | | |
| UNCLASSIFIED | | | | | | | | |
| TOTAL | | | | | | | | |

1. except where noted all data is to be reported as of December 1, 1970.
2. except 31100 and 31400
3. except 32500
4. for persons in the postion series 2000 and 2300-2400 series
5. office space for departmental support staff only
6. serving office facilities in this category.

## UNIVERSITY DATA[1] - INPUT MEASURES

1. Weekly student contact hours

   - to be reported on the form attached

2. Departmental Data

   - to be reported on the form attached

3. Classified FTE Enrolment

   - not necessary to report this data. This information will we extracted from the UA-3 enrolment reporting forms.

4. Non-academic (non-teaching) staff

   - headcount of all non-academic (non-teaching) staff from all payrolls for the pay period ending November 30, 1970 and excluding departmental support staff and library staff.

   NUMBER OF PERSONS[2] - _____

5. Library staff

   - to be calculated as in section 3 above

   LIBRARY STAFF - _____

6. Equivalent volumes

   - to be calculated as per the California standards reproduced below:

| | | | |
|---|---|---|---|
| 1000 | documents and pamphlets | = 125 volumes | _____ |
| 400 | microfilm reels | = 125 volumes | _____ |
| 10,000 | microfilm cards, prints | = 125 volumes | _____ |
| 7 | newspapers - unbound display | = 125 volumes | _____ |
| 9 | - back files | = 125 volumes | _____ |
| 15 | periodicals - unbound display | = 210 volumes | _____ |
| 30 | - boxed | = 125 volumes | _____ |
| 500 | recording discs | = 125 volumes | _____ |
| 1 | book | = 1 volume | _____ |

1. except where noted all data is to be reported as of December 1, 1970.
2. If possible note number of persons employed temporarily.

UNIVERSITY _____

DEPARTMENTAL DATA - INPUT MEASURES

| DEPARTMENT | CLASSROOMS SEMINARS TUTORIALS WEEKLY STUDENT CONTACT HOURS | | LABORATOR WEEKLY STUDENT CONTACT HOUR | TOTAL BY DEPARTMENT |
|---|---|---|---|---|
| | CLASSROOMS | SEMINARS & TUTORIALS | | |
| | | | | |
| UNCLASSIFIED | | | | |
| TOTAL | | | | |

## DEPARTMENTAL DATA[1] - INPUT MEASURES

| DEPARTMENT | FULL-TIME ACADEMIC (TEACHING) | FTE OF PART-TIME ACADEMIC (TEACHING) STAFF[2] | DEPARTMENTAL SUPPORT STAFF[3] | FULL-TIME GRADUATES | | FTE OF PART-TIME GRADUATE[4] |
|---|---|---|---|---|---|---|
| | | | | GRAD. | PDF* | |
| | | | | | | |
| UNCLASSIFIED | | | | | | |
| TOTAL | | | | | | |

1. except where noted all data is to be reported as of December 1, 1970.
2. calculated as per DUA instructions on the UA-1 forms (includes graduate and others who teach, demonstrators)
3. headcount of all non-academic (teaching) staff from all payrolls for the pay period ending November 30, 1970 and including only departmental support staff (such as technicians, laboratory assistants, markers, animal attendants).
4. calculated as per DUA instructions on the UA-3 enrolment reporting forms.

* Post-doctoral fellow